

KSONIK III

Ultrasonic Level Transmitter

Long range ultrasonic level/flow transmitter

K-TEK Products



Introduction

The KSONIK III is an Ultrasonic Level Transmitter capable of measuring two separate levels in liquid or solid applications up to 195 ft./60 meters, or flow rates in all types of open channel flow applications. The unit is available with two 4-20 mA ADC analog and five relay outputs. A system can consist of up to two transducers and a single transmitter with the transducer(s) installed at the top of a silo or tank, facing down towards the material being measured.

The transmitter's microprocessor simultaneously fires an electronic pulse to the transducer and starts a timer. The transducer converts this electronic pulse to an acoustic pulse, which is directed toward the surface of the material being measured. When the acoustic pulse contacts the surface of the material, energy is reflected back to the transducer, which converts this reflected energy back to an electronic pulse. This pulse is sent back to the microprocessor, which stops the timer and determines the "time of flight" of the signal. By combining the speed of sound through air and the "time of flight" of the pulse, the microprocessor accurately determines the level of the product. Powerful software removes false echoes from the signal and electronic filters remove ambient noise.

Features

- Long range up to 195 ft./60 m
- Graphic LCD display
- Single or dual channel configuration
- 5 configurable relays/8 amp
- Pump cycling & pump monitoring
- Remote totalizer count outputs
- Configurable as a single or dual open channel flow meter
- Differential level measurement
- Integrated analytical KSCOPE software
- Automatic variable gain & power for difficult applications


Applications

- Great for sumps or lift stations with up to five pumps
- Cost effective level measurement for multiple silo applications
- Versatile: short or long range liquid or dusty solids applications
- Open channel flow measurement in the following configurations: v-notch, flumes or weirs

Options

- Transducers for liquids, solids & corrosive liquids
- Windows based configuration software
- Aiming kit

SPECIFICATIONS

Enclosure	Polycarbonate with clear hinged lid; IP65 / NEMA 4	
Power Supply	110 VAC or 240 VAC; $\pm 15\%$ 50/60 Hz, 8VA	
Dimensions	8.4 x 7.3 x 4.7 inches / 213 x 185 x 118 mm	
Weight	3.52 lbs / 1.6 kg	
Temperature Range	-22 to 149°F / -30 to 65°C	
Output	Analog: 1 ea. (Single Channel) or 2 ea. (Dual Channel) 4-20mA isolated; 16 bit resolution; 750 ohm max. resistance	
Relays	5 x SPDT 8 AMPS 240 VAC Fully Configurable	
Range	195 ft. / 60 m	
Accuracy	0.25% full span with temperature compensation	
Local Indication	128 x 64 dot graphic display	
Configuration	5 touch button keys or optional KSCOPE Software	
Blanking Distance	Refer to Ultrasonic Transducer & Accessories DS/TRANSDUCERS-EN	
Rate of Change	0.03 to 65 ft. / minute; 0.01 to 20 m / minute	
Classification	General Purpose	
CE Mark	EN 50082-2 EN 50081 EN 61010-1	Immunity Emission Safety 

ORDERING INFORMATION

KSIII/a/b		
/a	Power Supply	
	2	120 VAC and 220 VAC
/b	Instrument Type	
	S	Single Channel
	D	Dual Channel

Ordering Notes:

1. Transmitter, Transducer(s) & Accessories must be ordered separately.
2. The listed transducers below are compatible with the KSONIK III transmitter
3. For a dual transmitter type (/D), identical transducers must be used with the KSONIK III

TRANSDUCERS

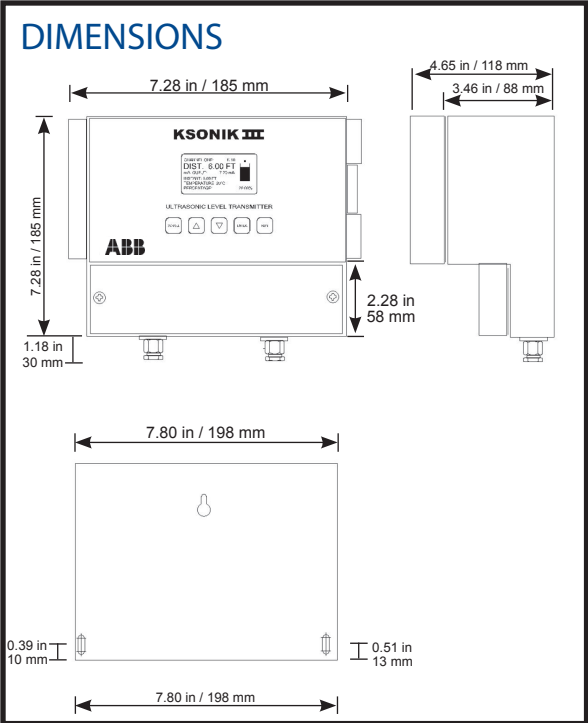
(order separately; refer to Transducer Data Sheet DS/TRANSDUCERS-EN for complete details)

Model	Measuring Range
K10C	Liquids (50 ft./15 m max) or Solids (16 ft./5 m max)
K10T3C	Corrosive Liquids (50 ft./15 m max) with 3" PTFE Lined Flange
K10T4C	Corrosive Liquids (50 ft./15 m max) w/ 4" PTFE lined flange
K20C	Liquids or Solids (100 ft./30 m max)
K20HC	Powders (100 ft./30 m max)
K60C	Liquids or Solids (195 ft./60 m max)

Note: All transducers are supplied with 16 ft./5 m cable lengths. For temperature compensation add "C".

AVAILABLE ACCESSORIES

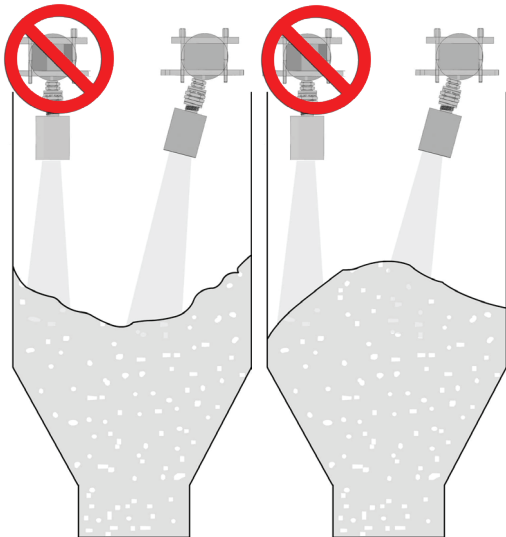
AKIT	Aiming Kit (304 SS Mounting & Clamping Plates)
KSCOPE	KSONIK Scope Software
EXT-CABxxx	Transducer cable length is available up to 328 ft./100 m. If customer requirement is greater than 16 ft./5 m standard length, then specify total cable length in feet (xxx).



MOUNTING RECOMMENDATIONS

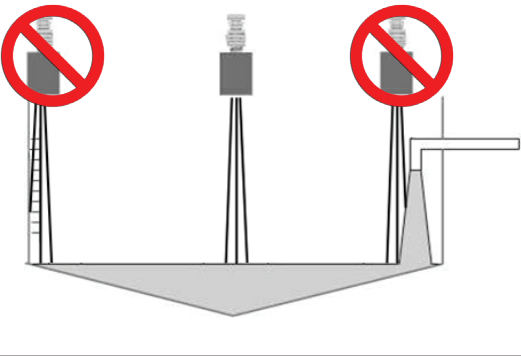
Solids Installation Recommendations

Aiming Kit is recommended to aim at middle of silo. This helps to get the maximum return echo.

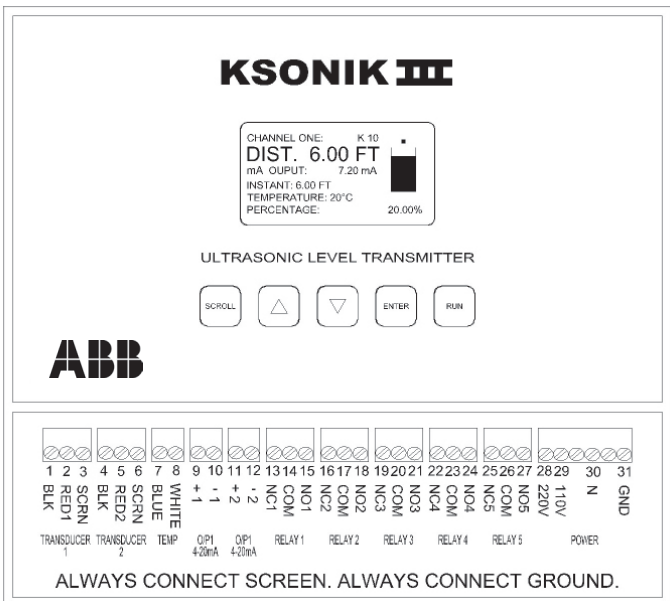


Liquids Installation Recommendations

Avoid installations where vessel obstructions or fill lines interfere with beam path.



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